

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A direct vessel injection-type pressurized light water reactor (DVI-PLWR), ~~in which an emergency core cooling water is directly injected into a reactor vessel, the DVI-PLWR comprising:~~

a plurality of longitudinal corrugations vertically arranged around each of an inner surface of a pressure vessel of the a reactor vessel and an outer surface of a core barrel of the reactor vessel at regular intervals, ~~so that~~ to form a vertical groove ~~is formed~~ between two neighboring corrugations.

Claim 2 (currently amended): The direct vessel injection-type pressurized light water reactor (DVI-PLWR) according to claim 1, wherein each of the corrugations is bisected along a perpendicular bisector into two inclined surfaces, ~~such that~~ wherein each corrugation has a V-shaped cross-section, with the two inclined surfaces meeting at a predetermined angle of intersection.

Claim 3 (original): The direct vessel injection-type pressurized light water reactor (DVI-PLWR) according to claim 2, wherein each of the corrugations is provided with a welding flange along an outside edge of each of the two inclined surfaces.

Claim 4 (original): The direct vessel injection-type pressurized light water reactor (DVI-PLWR) according to claim 2, wherein each of the corrugations is provided with a plurality of holes which are formed along each of the two inclined surfaces at

regular intervals.

Claim 5 (original): The direct vessel injection-type pressurized light water reactor (DVI-PLWR) according to claim 4, wherein each of the holes has a diameter of $1/2$ of a width (h) of each of the two inclined surfaces, and the regular intervals of the holes are set such that a distance between centers of the holes is equal to the width (h) of each of the two inclined surfaces.

Claim 6 (original): The direct vessel injection-type pressurized light water reactor (DVI-PLWR) according to claim 1, wherein each of the corrugations has a length not less than seven times a diameter of a cold leg, and the corrugations are vertically arranged around the inner surface of the pressure vessel and the outer surface of the core barrel, ~~such that a length ratio of an upper section to a lower section of each of the corrugations is set at 4:3 when the upper and lower sections of the corrugation are sectioned on the basis of a central axis of the cold leg ,~~ wherein the length ratio from the center of the cold leg to the top of the corrugations versus from the center of the cold leg to the bottom of the corrugations is set at 4:3.